

Safety Briefing for MINOS Underground Tours

Description of Environment

The MINOS service building and underground areas are posted as Radiological Controlled Areas and there may be radioactive material present. If you do not have GERT (General Employee Radiological Training) or Radiation Worker Training, you are required to be escorted by a qualified trained employee who will inform you of any hazards should they exist. Access to the MINOS Absorber Passageway area, will require prior AD RSO (Radiation Safety Officer) approval, and an additional Radiation Safety briefing.

Visitors should know they are going **330-feet underground**, about 1.5x the height of the High Rise, in a construction-style elevator which is slightly larger than the High Rise elevators, with a 2 minute transit time. The walking distance, there and back, is about 600-ft. The tour areas are between 22-ft and 35-ft wide, and 35-ft to 45-ft high. There is a separate Egress passage parallel to the entire tour area on the east wall, running from the back of the MINOS Hall to the elevator alcove. There are 3 doors into the Egress passage downstream of the elevator alcove.

Steel plates on the floor near the base of the shaft can present a **trip hazard**, and visitors should watch their footing when they exit the elevator alcove. No open-toed shoes are allowed in the underground area. Visitors are encouraged to wear long pants and sturdy walking shoes and are encouraged to **carry a flashlight** while underground. All personnel **MUST** wear a **hard-hat** while underground.

The **MINOS detector is magnetized**, although the field around the detector does not exceed 300-Gauss (0.03 Tesla) – about as strong as 2-lb-pull blackboard magnet. When the red warning light is blinking and the magnet is energized all personnel with pacemakers, other medical electronic devices, ferromagnetic metallic surgical implants and coronary stents **MUST STAY OUT**, of the signed barrier and red floor line in the Hall– a similar line is marked by signs in the Egress passage. Unless you get very close to the coil, this size field is no hazard to credit card magnetic strips.

Conduct of Tour

Visitors must **stay with their Escort(s)** at all times, and be within visual and audible contact. Visitors must obey all instructions from the Escort. The Escort has the option to cut a tour short and return the group to the surface if any visitor cannot stay with the group.

The apparatus for installed experiments should not be touched or bumped. There may be work-in-progress underground with the presence of tools and equipment, which may require walking around, and which also should not be moved or touched.

For personnel accountability purposes, you will be required to **badge in and badge out**, at the badge board located adjacent to the elevator. Please take an orange access badge and replace it with either your FNAL ID or a visitor's badge, prior to entering the elevator. If you do not have an ID which can be left on the board, fill out a manila tag, there should be a small stack of them below the badge board.

Emergency Response

Alarms for smoke or fire will generate an automatic broadcast on the PA system stating the area where the alarm originated (the Target Hall at MI-65, or the MINOS Hall) and instructions for which exits to proceed to.

The underground facility is equipped with **positive pressure emergency escape passageways**, and redundant levels of fire protection including fire detection and suppression. In the event of the fire protection system alarming please listen to the announcement and to

your escort for instructions on exiting the facility via emergency passageway to the elevator. After evacuating to the surface please go to the parking area in front of the MINOS service building with your escort.

In the event that your escort instructs you to exit the MINOS facility via the emergency passageway to the MI-65 facility you will be required to follow your escort to the shaft area adjacent to the elevator to pick up and possibly don a Ocenco M-20 self rescuer, which is located and stored in a marked plastic box. Then follow your escort to the emergency passageway. Visitors should understand the **alternate exit** entails a 300-ft walk up an 11% grade (the Absorber Tunnel), followed by a 2200-ft walk up a 3% grade in **the Decay Tunnel**, which also has a wet floor, trip hazards where the drain gutters cross the passage, and no lights. There is a 2-story flight of stairs from the Decay Tunnel into the Target Hall, and another 6-story flight of stairs up the Target Hall shaft, although conditions in the Target Hall may allow the use of its elevator.

Detectors involving cryogenic equipment may have an **ODH alarm**, which on sounding will not generate a PA broadcast. Proceed directly to the elevator via the Egress passage and exit the underground.

In the case of any injury which results in anyone needing first aid or having difficulty walking, **call x3131** to inform the emergency operator of your situation and wait for the Fire Department to respond.

Non-Emergency Response

The underground facility is equipped with an **emergency generator** in case of a loss of power. In the event that we were to experience a loss of power we ask that you stand still, turn your flashlight on, and listen to your escort for instructions. The emergency power should come on within 15 seconds, which will allow you to immediately go into the emergency passageways to exit the underground facility via the elevator.

If the elevator loses power, remain at the base of the elevator in the Egress Passage, call x3131 and inform the emergency operator of your situation. Wait for instructions from the Fire Department. If the small backup elevator is functioning (not a power outage situation) the Fire Department will assist in evacuating the group using the small elevator. If both elevators are out, the Fire Department may assist in evacuating the group via the Decay Passage (they walk down from upstream and walk everyone back up) or an alternative (use the man-basket on the crane).

If the elevator gets stuck while in transit, call x3131 and inform the emergency operator of your situation. The Fire Department will respond to evacuate the group.

You will now receive field training on the **Ocenco M-20 rescuer**, which will cover the donning procedures of how to use the self rescuer.

If you have any questions please do not hesitate to ask your escort or ES&H support personnel. Otherwise, please sign below to indicate you have read and understand the MINOS Underground Safety Briefing as stated above.

Print Name & Badge Number

Tour #

Signature & Date